ACT Basics: Trigonometry **Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **Radian – Degree Conversion** | | | | | | |
| http://www.algebralab.org/img/49461ca6-ee26-4d4c-8822-29523e034621.gif  Radians to Degrees - multiply by  Degrees to Radians - | | | *Example 1:*  What is 2 radians in degrees?  To change this [radian](javascript:def('/Glossary/glossaryterm.aspx?word=Radian',%20500,%20500);) measurement to degrees, we multiply: http://www.algebralab.org/img/2e4bd433-7374-40e4-917e-f0c4b325ba52.gif | | | *Example 2:*  What is 70º in radians?  To change this degree measurement to radians, we multiply as follows: http://www.algebralab.org/img/bf70710b-84c3-4b84-8c8a-effde18953b4.gif |
| 1. | What is 60º in radians? | | 2. | Find the radian measure of 225°. | | |
| 3. | Express rad in degrees. | | 4. | What is radians in degrees? | | |
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| **Using Trigonometry to Find the Missing Side** | | | | | | |
| 5. |  | | 6. | |  | |
| 7. |  | | 8. | |  | |
| 9. |  | | 10. | |  | |
| **[http://4.bp.blogspot.com/_ufoH7a6Pb_E/RiwYJOD1daI/AAAAAAAAACA/pXZFoUXBueM/s320/triangle2.JPG](http://4.bp.blogspot.com/_ufoH7a6Pb_E/RiwYJOD1daI/AAAAAAAAACA/pXZFoUXBueM/s1600-h/triangle2.JPG)Using Trigonometry to Find Angle Measures**  **Example:**  So from this triangle, we can tell that: SinA = (4/5)  SinA = 0.8 \*\*\*\*inverse needed here A = 53.13 degrees  \*\*\*\* **Use sin-1, cos-1 and tan-1 to convert to angle measurement** | | | | | | |
| 11. | | \*\*\*Enter SHIFT then sin-1 to convert 0.8746 | 12. | |  | |
| 13. | |  | 14 | |  | |
| 15. | |  | 16. | |  | |
| 17. | |  | 18. | |  | |
| 19. | |  | 20. | |  | |
| ADVANCED TRIGONOMETRIC CONCEPTS:   * SEC (secant) = 1/COS * CSC (cosecant) = 1/SIN * COT (cotangent) = 1/TAN | | | | | | |
| 21. | | What is , if ? | 22. | | Complete the equation:  COT = | |

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| **Radian – Degree Conversion** | | | | | | |
| http://www.algebralab.org/img/49461ca6-ee26-4d4c-8822-29523e034621.gif  Radians to Degrees - multiply by  Degrees to Radians - | | | *Example 1:*  What is 2 radians in degrees?  To change this [radian](javascript:def('/Glossary/glossaryterm.aspx?word=Radian',%20500,%20500);) measurement to degrees, we multiply: http://www.algebralab.org/img/2e4bd433-7374-40e4-917e-f0c4b325ba52.gif | | | *Example 2:*  What is 70º in radians?  To change this degree measurement to radians, we multiply as follows: http://www.algebralab.org/img/bf70710b-84c3-4b84-8c8a-effde18953b4.gif |
| 1. | What is 60º in radians?  **1.047 radians** | | 2. | Find the radian measure of 225°.  **3.927 radians** | | |
| 3. | Express rad in degrees.  **120°** | | 4. | What is radians in degrees?  **330°** | | |
|  | | | | | | |
| **Using Trigonometry to Find the Missing Side** | | | | | | |
| 5. | **5.1** | | 6. | | **5.4** | |
| 7. | **11.12** | | 8. | | **25.6** | |
| 9. | **50.7** | | 10. | | **61.5** | |
| **[http://4.bp.blogspot.com/_ufoH7a6Pb_E/RiwYJOD1daI/AAAAAAAAACA/pXZFoUXBueM/s320/triangle2.JPG](http://4.bp.blogspot.com/_ufoH7a6Pb_E/RiwYJOD1daI/AAAAAAAAACA/pXZFoUXBueM/s1600-h/triangle2.JPG)Using Trigonometry to Find Angle Measures**  **Example:**  So from this triangle, we can tell that: SinA = (4/5)  SinA = 0.8 \*\*\*\*inverse needed here A = 53.13 degrees  \*\*\*\* **Use sin-1, cos-1 and tan-1 to convert to angle measurement** | | | | | | |
| 11. | | \*\*\*Enter SHIFT then sin-1 to convert 0.8746  **61°** | 12. | | **83°** | |
| 13. | | **64°** | 14 | | **16°** | |
| 15. | | **62°** | 16. | | **44°** | |
| 17. | | **41°** | 18. | | **71°** | |
| 19. | | **31°** | 20. | | **71°** | |
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| 21. | | What is , if ?  http://img.sparknotes.com/content/testprep/bookimgs/sat2/math2c/0008/m2c.total361.gif | 22. | | Complete the equation:  COT =  **COT = =** | |